Quality Management And Trust Of Internet Banking In Thailand

Kanokkarn Snae Namahoot, Tipparat Laohavichien

Abstract: The purpose of this research is to examine the relationship among the quality management, trust and behavioral intention to use internet banking of customers in Thailand. Using a structured questionnaire, primary data were collected from 400 internet banking users from both public and private banks, randomly selected from various parts of Thailand. Multiple regression was used to study the effect of quality management on trust and the effect of trust on behavioral intention to use internet banking. The findings indicate that the strongest predictor of quality management on trust is the service quality. In addition, the results show that trust and behavioral intention to use internet banking is positively correlated in the moderate level. There are three factors of quality management (service quality, system quality, and information quality) that associated with internet banking. The system and service qualities positively affects on trust, however, the information quality negatively affects on trust. The results of this study suggest that trust on internet banking services derive from these followings: (1) accuracy and fast response of the data transaction; (2) stability of the system; (3) the lower fees and (4) time saving.

Index Terms: Internet banking, Behavioral intention to use internet banking, Quality management, Trust.

1 INTRODUCTION

NOWADAYS, banking is one of the services that are important in everyday life. Many researchers have focused on using the internet for financial services [25, 26]. Since competition has increased in the banking system, new technology helps facilitate banking services and increase the challenges facing the banking industry in the areas of quality management and trust [20]. In addition, banks are committed to developing customer contact in order to provide more support to customers and is another way to attract customers. Most banks have introduced various technologies to help in the implementation of transactions processing and related financial services. Competitiveness of the banking business can be gained by the new products and faster services to the target customers. Internet banking is an alternative for the banks to provide extended services. This is achieved by investing in the development of transactional services using internet technology. Most banks focus on reducing the cost of operations and improving efficiency in operations, offering services available at any time (24 hours a day, 7 days a week) [23]. Such services include balance enquiry, financial transactions statement printing, funds transfer, and bill payment (Frust, Lang, & Nolle, 2000). It is not only the technology but also the business processes that are critical, including customer care, customer data management, and customer information security. For this reason, both internal and external development of internet banking services connects bank staffs and resources together. Internet banking consists of a network of customers, application servers and databases [16] which combine bank operations, information technology and online transactions for efficient execution of services [39]. Internet banking usage has experienced significant growth in almost every country worldwide.

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However, the adoption of transaction processing systems still not very famous. In a preliminary survey in the U.S., it was found that people who use internet banking are mostly customers who have opened an online account. The research of ACNielsen (2007)[1] found that the use of banking services on the internet has increased in Asian countries. Therefore, providing these services through advertising campaigns by the banks can increase number of internet banking users [23]. For internet banking services in Thailand, the number of accounts using online banking stands at 8,943,950 accounts in year 2014, but only 15,886 customers accessing transaction services. (Bank of Thailand, 2014). The online services offered through banks accessed on a 24 hour daily basis by customers included such things as paying cell phone bills, credit card bills, payment for internet access, house/mortgage payments and university tuition fees. Some banks have added extra services for customers' convenience such as setting a date for advanced payments. These services facilitate customers and provide greater customer satisfaction. However, using internet banking still not very popular due to the fact that customers do not trust the safety of the system. A survey indicated that the implementation of banking services on the internet is growing rapidly and is expected to continue to grow steadily. However, the limitations of technologies and management of the internet banking had to be improved [41]. Haag et al. (2000)[36] demonstrates that there has been an increase in the efficiency of the service information such as speed of information processing, accuracy, reliability of information and ease of use. Also, security of access to information, the identification of use, and building trust on the internet banking has been enhancement, making internet banking safer and more reliable [31]. A primary survey by the National Statistics found that 53% of total bank's customers used internet banking, 26% of total bank's customers used electronic payment (E-payment). However, there are important factors that deter customers from using internet banking such as doubt of internet banking safety (59% of customers), doubt of legal support in the case of error or fraud (32% of customers) and fear of the complexity of such systems (29% of customers) (Bank of Thailand, 2012). There are factors that affect the adoption of the technology, such as trust of the system, quality of service and risk. In this research, we have studied the factors that influence the behavior of the users who use internet banking and the factors that affect user's

trust. These can help guiding banks to improve the internet banking system to promoting a positive image and boosting consumer confidence in choosing internet banking. It is important to increase the number of users conducting financial transactions, and to meet the needs of customers using the internet banking.

2 RESEARCH QUESTIONS

1. In Thailand, how quality management affect customers' trust in internet banking usage?
2. Is there any influence of trust on behavioral intention to use internet banking in Thailand?

3 OBJECTIVES OF THE RESEARCH

In this study, there are two main objectives:

1. To study the effect of quality management on trust.
2. To study a relationship between trust and behavioral intention to use internet banking.

4 LITERATURE REVIEW

4.1 Behavioral Intention to Use Internet Banking

The TRA (Theory of Reasoned Action) is a well-established social psychological model that is concerned with the determinants of consciously intended behaviors [24]. From a theoretical point of view, the TRA is intuitive, parsimonious, and insightful in its ability to explain behavior [32]. The TRA assumes that individuals are usually rational and will consider the implications of their actions prior to deciding whether to perform a given behavior [15]. The TRA is a general model and, as such, it does not specify the beliefs that are operative for a particular behavior (Davis et al., 1989). Thus, the researcher using the TRA must first identify the beliefs that are salient for participants regarding the behavior under investigation. Furthermore, the TRA deals with the prediction, rather than outcome of behaviors [42]. In the TRA, behavior is determined by behavioral intentions, thus limiting the predictability of the model to situations in which intention and behavior are highly correlated. The TRA is a general model and, as such, it does not specify the beliefs that are operative for a particular behavior (Davis et al., 1989). Thus, the researcher using the TRA must first identify the beliefs that are salient for participants regarding the behavior under investigation. Furthermore, the TRA deals with the prediction, rather than outcome of behaviors [42]. In the TRA, behavior is determined by behavioral intentions, thus limiting the predictability of the model to situations in which intention and behavior are highly correlated. The highest correlates between intention and behavior are found where the temporal gap between their expressions is minimal. To take the extreme case of overcoming this, however, measuring intention and behavior simultaneously fails to ensure a true test of the model's power to predict the future. At best, it corroborates the attitudinal basis of current behavior. Davies et al (2002)[17] suggested that in order to test TRA, actual behavior should be measured objectively and unobtrusively without signaling in any way its connection to the prior intention measurement phase. A further requirement of the TRA is that behavior must be under volitional control. Hence, the TRA is ill equipped to predict situations in which individuals have low levels of volitional control [14].

4.2 Trust

The role of trust in the development and maintenance of successful relationships is likely to be of particular significance in the financial services sector because of the complexity of many products [3, 10, 34]. Trusting intention means that one is willing to depend on, or intends to depend on, the other party even though one cannot control that party [4, 7]. Trusting belief and trusting intention came primarily from social psychology, which says that interactions between people and cognitive emotional reactions to such interactions determine behavior. In this study, we use the term trust from the viewpoint of trusting belief. Trust refers to the belief that the promise of another can be relied upon and that, in unforeseen circumstances, the other will act in a spirit of goodwill and in a benign fashion toward the trustor [35]. The customer's trust is, therefore, a confident belief in the service [22, 5]. In many cases, the trust is based on previous interactions, although a service previous behavior cannot guarantee that he/ she will act as expected [5]. Customers' trust will increase if a service has behaved previously as expected. Trust is the perceptions of competence, has three characteristics: ability, benevolence, and integrity [33, 9]. Ability means that a trustor believes that a trustee has the power to do for him/ her what he/she needs done. Benevolence is the extent to profit motive. Integrity means that a trustor believes that a trustee makes good-faith agreements, tells the truth, acts ethically, and fulfills promises. McKnight and Chervany (2002)[9] presented one other characteristic of trust, predictability. Mayer et al.,(1995)[33] however, asserted that trust must go beyond predictability because if one does not trust the other party he/she can ignore the needs of others and act in a self interested fashion. This study adopts the trust characteristics presented by Mayer et al. (1995) [33].

4.3 Information System Success Model

DeLone and McLean (1992)[37] reviewed information system success measures and devised a model of the interrelationships between six information system (IS) success factors: system quality, information quality, use, user satisfaction, individual impact and organizational impact, as shown in Figure. 1 [40]. Based on prior studies, DeLone and McLean (2003)[38] updated their model of IS success by adding a ''service quality" measure. Whether service quality should be included in the IS success model is still controversial [38]. According to DeLone and McLean (2003)[38], To measure the success of a single system (individual system), 'information quality' or 'system quality' may be the most important quality component.

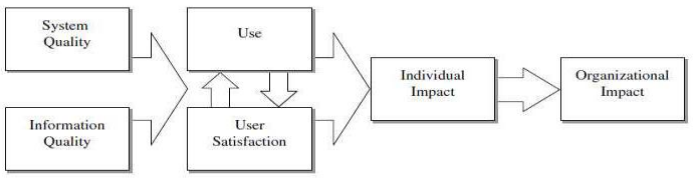

Figure 1 *DeLone and McLean (1992)[37]*

DeLone and McLean (1992) insisted that system quality and information quality affects the extent of its utilization and its users' satisfaction, ultimately influencing the behaviors of individuals and the organizations to which they belong.

4.4 System Quality and Information Quality

System quality and information quality are important factors in the IS success model, which determines users' trust in financial transactions [25]. Because internet banking does not involve face-to-face contact, high system quality and information quality are critical to ensure users' trust. System quality refers to the performance of IS in terms of reliability, convenience, ease of use, functionality, and other system metrics. Information quality refers to characteristics of the output offered by the IS, such as accuracy, timeliness, and completeness [38]. Lin and Lu (2000)[2] also argued that the quality of the information system, as measure by response time and system accessibility, was able to elicit usage on the system. These relationships were also presented and supported by Seddon (1997)[30] in an extension of the IS success model.

4.5 Service Quality

Parasuraman et al., (1985, 1988)[27, 28] studies showed that high levels of customer service quality can expect a positive influence on customer satisfaction. Unlike the manufacturing product quality that can be readily assessed. The service quality is an elusive and abstract construct that poses definition and measurement obstacles. The literature has suggested that service quality is determined by the differences between customers' expectations of service provider's performance and their evaluation of the service they received. There are five dimensions of service quality in this study which are as follows: **Tangibles** is the appearance of facilities, equipment, materials, and personnel, **Reliability** is the performance of the service in a dependable and accurate manner; **Responsiveness** is the willingness of staff to help customers and provide prompt service, **Assurance** is the staff's ability to provide courteous and knowledgeable service and **Empathy** is the staff's ability to understand the needs of the customer.

5 HYPOTHESES

There are 2 hypotheses of this research

H1: Quality management have effect on trust.

H2: There is a positive relationship between trust and behavioral intention to use internet banking.

H2a: There is a positive relationship between 'ability' aspect of trust and behavioral intention to use internet banking.

H2b: There is a positive relationship between 'benevolence' aspect of trust and behavioral intention to use internet banking.

H2c: There is a relationship between 'integrity' aspect of intention to use internet banking.

which are as follows:

The model of this study shows in Figure 2

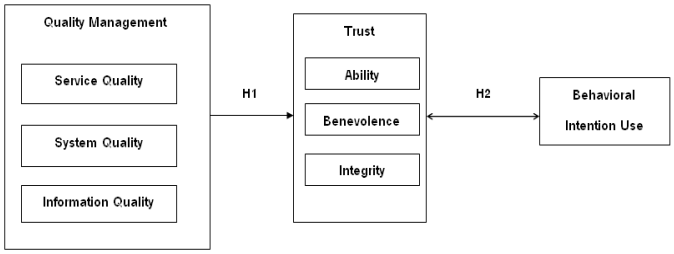

Figure 2 Research model

6 RESEARCH METHODOLOGY

6.1 Sample Design and Data Collection

This study reports on the analysis of primary data which have been collected from a sample of 400 respondents (who had internet banking experience in Thailand). The number of respondent was calculated by using formula of Yamane (1973)[43]. The samples were identified randomly and drawn from both public and private banks in different parts of Thailand. The questionnaire was pretested among 30 trial respondents. The collected data was analyzed by using both descriptive and inferential statistics. Descriptive statistical tools used in this study were percentage, mean, standard deviations. Correlations and inferential statistics tools such as regression analysis have been used to study the interrelationship between variables.

6.2 Reliability and Validity Analysis of the Instrument

Construct reliability measures the stability of scale based on internal consistency of items. The reliability of the constructs was measured using Cronbach's alpha which should be statistically significant and preferably greater than 0.70 [18, 19]. As a result of these refinements and purification, the initial measurement instrument of 43 items was reduced down to 42 items for the final, refined measurement model. The validity for all variables are measured by factor loading which indicate internal consistency for all factors measurement. The result of factor loadings shows that all are above 0.4, thus indicating convergent validity for all factors. [44]

7 RESULTS AND INTERPRETATION OF DATA ANALYSIS

7.1 Demographic characteristics of the respondents

The 400 respondents who participated in the study are grouped into various categories on the basis of gender, age, education, occupation and monthly income. The respondent's profile is exhibited in Table 1.

TABLE 1.

DESCRIPTION STATISTICS OF RESPONDENTS' CHARACTERISTICS

Measure	Category	Frequency	Percentage
Gender	Male	180	45.00
	Female	220	55.00
Age	< 20	13	3.25
	20 - 25	121	30.25
	26 - 30	132	33.00
	31 - 35	88	22.00
	35 - 40	33	8.25
	> 41	13	3.25
Highest education	Diploma	20	5.00
	University (Undergraduate)	254	63.50
	University (Master)	120	20.00
	University (Doctoral)	6	1.50
Occupation	Students	78	19.50
	Employees	80	20.00
	State enterprise officers	132	33.00
	Government servants	98	24.50
	Others	12	3.00
Income (per month)	< 5,000 Bath	37	9.25
	5,000 - 9,999 Bath	40	10.00
	10,000 - 14,999 Bath	63	15.75
	15,000 - 19,999 Bath	98	24.50
	>= 20,000 Bath	162	40.50

- The demographic profile of survey respondents (Table 1) shows that most of the respondents are female (55.0%), aged between 26 and 30 years (33.00%), hold an undergraduate degree (63.50%), worked as state enterprise officers (33.00%) and earn monthly incomes higher than 20,000 Baht (40.5 %).

7.2 Multiple Regression

TABLE 2
Result of H1 Hypothesis Testing

	Unstandardized Coefficients				Collinearity Statistics	
	B	**Std. Error**	**T**	**Sig**	**Tolerance**	**VIF**
(Constant)	0.77	.117	.654	.014		
Service Quality	.687	.047	14.623	.000	.404	2.473
System Quality	.284	.042	6.706	.000	.404	2.473
Information Quality	0.55	0.41	-1.332	.184	.426	2.347

Dependent: trust
R=0.848, R_2=0.719, Adjusted R_2 =0.717

The result of hypothesis 1 (H1) testing shown in Table 2. It shows that H1 is not supported. Not all dimensions of quality management (service quality, system quality and information quality) have effect on trust. Only service quality and system quality have effect on trust. While, information quality have no effect on trust at 0.05 statistically significant level. The multiple regression equation of the effect that service quality and system quality have upon trust can be written as:

Trust = 0.077 + 0.687 service quality
+ 0.284 system quality ..... (1)

The adjusted R – square attained which equivalent to 0.717, it explains that 71.7 % of the trust is influenced by service quality and system quality. While the rest (28.3%) of the influence arises from other factors other than service quality, system quality and information quality.

7.3 Correlation

In order to assess possible correlation between variables, Pearson coefficient of correlation was calculated for all variables. We found significant interaction effect supporting hypotheses H2, H2a, H2b and H2c is accepted (shown in Table 3). Base on the result, it demonstrates that there is a positive relationship between trust and behavioral intention to use internet banking (0.580, 0.579, 0.496, 0.537) at the statistically significant level of 0.01 (the construct "trust" in this research includes ability, benevolence and integrity)

TABLE 3
RESULT OF H2 HYPOTHESIS TESTING

Hypothesis	n = 400 Pearson Correlation
H2: There is a positive relationship between trust and behavioral intention to use internet banking.	0.580**
H2a: There is a positive relationship between 'ability' aspect of trust and behavioral intention to use internet banking.	0.579**
H2b: There is a positive relationship between 'benevolence' aspect of trust and behavioral intention to use internet banking.	0.496**
H2c: There is a positive relationship between 'integrity' aspect of trust and behavioral intention to use internet banking.	0.537**

**Correlation is significant at the 0.01 level (2-tailed)

8 CONCLUSION

This research has successfully achieved its primary objectives which are to find the effects of different dimensions on quality management and trust on internet banking in Thailand. Based on the findings in the previous section of quality management, it found that service quality and system quality are the major factors relating in building trust of behavioral intention to use internet banking. These two important factors are comprised of these followings: (1) security of system (2) system usability (3) easy learning language website (4) transaction speed and (5) the service reliability (with no occurrences of errors and problems during the transaction). The research also found that there is a positive correlation between trust and behavioral intention to use internet banking. This basically implies that users regard trust in the system as the major point in their use of internet banking. Moreover, it also can assist in enhancing user satisfaction with the internet banking system. As the result, users become familiar with the service and feel confident to continue to use the system in the future and to recommend the service to others**.** Future research should also examine the relationship of other dimensions (e.g., perceive risk, brand image and brand loyalty) effected on trust in internet banking using Structural Equation Model (SEM)**.**

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